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BEFORE THE  
TENNESSEE REGULATORY AUTHORITY

T.R.A. DOCKET ROOM

DIRECT TESTIMONY OF  
PAUL R HERBERT

ON BEHALF OF TENNESSEE-AMERICAN WATER COMPANY

CASE NO. 04-\_\_\_\_\_

CONCERNING

BILL FREQUENCY ANALYSIS

AND

PROOF OF REVENUES

SEPTEMBER 2004

BEFORE THE TENNESSEE REGULATORY AUTHORITY

RE: TENNESSEE-AMERICAN WATER COMPANY

CASE NO. 04-\_\_\_\_\_

DIRECT TESTIMONY OF PAUL R HERBERT

Line

No

- 1 Q Please state your name and address
- 2 A My name is Paul R Herbert. My business address is 207 Senate Avenue,
- 3 Camp Hill, Pennsylvania
- 4 Q By whom are you employed?
- 5 A I am employed by Gannett Fleming, Inc
- 6 Q. Please describe your position with Gannett Fleming, Inc and briefly state
- 7 your general duties and responsibilities
- 8 A I am Senior Vice President My duties and responsibilities include the
- 9 preparation of accounting and financial data for revenue requirement and
- 10 cash working capital claims, the allocation of cost of service to customer
- 11 classifications, and the design of customer rates in support of public utility
- 12 rate filings.
- 13 Q. Have you presented testimony in rate proceedings before a regulatory
- 14 agency?
- 15 A Yes I have testified before the Pennsylvania Public Utility Commission, the
- 16 New Jersey Board of Public Utilities, the Public Utilities Commission of Ohio,
- 17 the Public Service Commission of West Virginia and the Kentucky Public
- 18 Service Commission, the Iowa State Utilities Board and the Virginia State

1 Corporation Commission, concerning revenue requirements, cost of service  
2 allocation, rate design and cash working capital claims. A list of the cases in  
3 which I have testified is provided at the end of my direct testimony

4 Q What is your educational background?

5 A I have a Bachelor of Science Degree in Finance from the Pennsylvania State  
6 University, University Park, Pennsylvania

7 Q Would you please describe your professional affiliations?

8 A I am a member of the American Water Works Association and serve as a  
9 member of the Management Committee for the Pennsylvania Section. I am  
10 also a member of the Pennsylvania Municipal Authorities Association. In  
11 1998, I became a member of the National Association of Water Companies  
12 as well as a member of its Rates and Revenue Committee

13 Q Briefly describe your work experience

14 A I joined the Valuation Division of Gannett Fleming Corddry and Carpenter,  
15 Inc., predecessor to Gannett Fleming, Inc., in September 1977, as a Junior  
16 Rate Analyst. Since then, I advanced through several positions and was  
17 assigned the position of Manager of Rate Studies on July 1, 1990. On June  
18 1, 1994, I was promoted to Vice President. On November 1, 2003, I was  
19 promoted to my current position of Senior Vice President

20 While attending Penn State, I was employed during the summers of  
21 1972, 1973 and 1974 by the United Telephone System - Eastern Group in its  
22 accounting department. Upon graduation from college in 1975, I was

1           employed by Herbert Associates, Inc , Consulting Engineers (now Herbert  
2           Rowland and Grubic, Inc ), as a field office manager until September 1977

3       Q     What is the purpose of your testimony in this proceeding?

4       A     The purpose of my testimony is to explain Tennessee-American Water  
5           Company's bill frequency analysis Exhibit No PRH-1

6       Q     Briefly describe the purpose of a bill frequency analysis.

7       A     A bill frequency analysis is the compilation of customer bills and  
8           consumption rendered during the test year and is used to support the  
9           present and proposed level of revenues from the application of present and  
10          proposed rates

11      Q     Please explain the exhibit

12      A     Customer consumption data was compiled for each customer classification,  
13          service area and meter size for the test year. This information was  
14          summarized and is shown under the column heading "per books - billing  
15          determinants". The figures across from the meter sizes indicate the number  
16          of bills issued during the test year for that meter size The figures across  
17          from the consumption blocks indicate the number of hundred cubic feet of  
18          consumption billed for each block for those bills issued during the year The  
19          billing determinants were adjusted for pro forma revenue adjustments for  
20          growth and weather normalization supported by another Company witness  
21          Those adjustments are reflected in the columns identified as "normalized"  
22          and "attrition year"

23      Q     How are the revenues determined?

1 A The revenues are the product of the billing determinants (number of bills and  
2 consumption by rate block) times the customer charges and consumption  
3 charges under present and proposed rates for each service area. The pro  
4 forma revenues are shown under the revenue column for the attrition year at  
5 present and at proposed rates.

6 Q. Do these figures agree with the revenues claimed by the Company in the  
7 case?

8 A Yes, they do

9 Q Does this conclude your direct testimony?

10 A Yes, it does

**LIST OF CASES IN WHICH PAUL R HERBERT TESTIFIED**

| <u>Year</u> | <u>Jurisdiction</u> | <u>Docket No</u> | <u>Client/Utility</u>   | <u>Subject</u>  |
|-------------|---------------------|------------------|---|---|
| 1 1983      | Pa PUC              | R-832399         | T W Phillips Gas and Oil Co                                     | Pro Forma Revenues  |
| 2 1989      | Pa PUC              | R-891208         | Pennsylvania-American Water Company                             | Bill Analysis and Rate Application  |
| 3 1991      | PSC of W Va         | 91-106-W-MA      | Clarksburg Water Board  | Revenue Requirements (Rule 42)  |
| 4 1992      | Pa PUC              | R-922276         | North Penn Gas Company  | Cash Working Capital  |
| 5 1992      | NJ BPU              | VWR92050532J     | The Atlantic City Sewerage Company                              | Cost Allocation and Rate Design   |
| 6 1994      | Pa PUC              | R-943053         | The York Water Company  | Cost Allocation and Rate Design   |
| 7 1994      | Pa PUC              | R-943124         | City of Bethlehem   | Revenue Requirements, Cost Allocation, Rate Design and Cash Working Capital |
| 8 1994      | Pa PUC              | R-943177         | Roaring Creek Water Company                                     | Cash Working Capital  |
| 9 1994      | Pa PUC              | R-943245         | North Penn Gas Company  | Cash Working Capital  |
| 10 1994     | NJ BPU              | WR94070325       | The Atlantic City Sewerage Company                              | Cost Allocation and Rate Design   |
| 11 1995     | Pa PUC              | R-953300         | Citizens Utilities Water Company of Pennsylvania                | Cost Allocation and Rate Design   |
| 12 1995     | Pa PUC              | R-953378         | Apollo Gas Company  | Revenue Requirements and Rate Design  |
| 13 1995     | Pa PUC              | R-953379         | Carnegie Natural Gas Company                                    | Revenue Requirements and Rate Design  |
| 14 1996     | Pa PUC              | R-963619         | The York Water Company  | Cost Allocation and Rate Design   |
| 15 1997     | Pa PUC              | R-973972         | Consumers Pennsylvania Water Company - Shenango Valley Division | Cash Working Capital  |
| 16 1998     | Ohio PUC            | 98-178-WS-AIR    | Citizens Utilities Company of Ohio                              | Water and Wastewater Cost Allocation and Rate Design                        |
| 17 1998     | Pa PUC              | R-984375         | City of Bethlehem - Bureau of Water                             | Revenue Requirement, Cost Allocation and Rate Design                        |
| 18 1999     | Pa PUC              | R-994605         | The York Water Company  | Cost Allocation and Rate Design   |
| 19 1999     | Pa PUC              | R-994868         | Philadelphia Suburban Water Company                             | Cost Allocation and Rate Design   |
| 20 1999     | PSC of W Va         | 99-1570-W-MA     | Clarksburg Water Board  | Revenue Requirements (Rule 42), Cost Allocation and Rate Design             |
| 21 2000     | Ky PSC              | 2000-120         | Kentucky-American Water Company                                 | Cost Allocation and Rate Design   |
| 22 2000     | Pa PUC              | R-00005277       | PPL Gas Utilities   | Cash Working Capital  |
| 23 2000     | NJ BPU              | W/R00080575      | Atlantic City Sewerage Company                                  | Cost Allocation and Rate Design   |

LIST OF CASES IN WHICH PAUL R HERBERT TESTIFIED, cont

|    |      |               |                |                                      |                                 |
|----|------|---------------|----------------|--------------------------------------|---------------------------------|
| 24 | 2001 | Ia St Util Bd | RPU-01-4       | Iowa-American Water Company          | Cost Allocation and Rate Design |
| 25 | 2001 | Va St Corp Cm | PUE010312      | Virginia-American Water Company      | Cost Allocation and Rate Design |
| 26 | 2001 | WV PSC        | 01-0326-WV-42T | West-Virginia American Water Company | Cost Allocation and Rate Design |
| 27 | 2001 | Pa PUC        | R-016114       | City of Lancaster                    | Tapping Fee Study               |
| 28 | 2001 | Pa PUC        | R-016236       | The York Water Company               | Cost Allocation and Rate Design |
| 29 | 2001 | Pa PUC        | R-016339       | Pennsylvania-American Water Company  | Cost Allocation and Rate Design |
| 30 | 2001 | Pa PUC        | R-016750       | Philadelphia Suburban Water Company  | Cost Allocation and Rate Design |
| 31 | 2002 | Va St Corp Cm | PUE-2002-00375 | Virginia-American Water Company      | Cost Allocation and Rate Design |
| 32 | 2003 | Pa PUC        | R-027975       | The York Water Company               | Cost Allocation and Rate Design |
| 33 | 2003 | Tenn Reg Auth | 03-0188        | Tennessee-American Water Company     | Cost Allocation and Rate Design |
| 34 | 2003 | Pa PUC        | R-038304       | Pennsylvania-American Water Company  | Cost Allocation and Rate Design |
| 35 | 2003 | NJ BPU        | WR03070511     | New Jersey-American Water Company    | Cost Allocation and Rate Design |
| 36 | 2003 | Mo. PSC       | WR-2003-0500   | Missouri-American Water Company      | Cost Allocation and Rate Design |
| 37 | 2003 | Pa PUC        | R-038805       | Pennsylvania Suburban Water Company  | Cost Allocation and Rate Design |
| 38 | 2004 | Va St Corp Cm | PUE-200-       | Virginia-American Water Company      | Cost Allocation and Rate Design |
| 39 | 2004 | Pa PUC        | R-049165       | The York Water Company               | Cost Allocation and Rate Design |

**Tennessee-American Water Company**  
**Summary of Present and Proposed Rates**

| <u>Chattanooga</u>           | <u>Present</u> | <u>Proposed</u> | <u>Increase</u> |
|------------------------------|----------------|-----------------|-----------------|
| 5/8 - inch meter             | 8 92           | 9 74            | 9 19%           |
| 3/4 - inch meter             | 14 97          | 16 34           | 9 15%           |
| 1 - inch meter               | 24 92          | 27 20           | 9 15%           |
| 1 1/2 - inch meter           | 49 87          | 54 44           | 9 16%           |
| 2 - inch meter               | 79 77          | 87 08           | 9 16%           |
| 3 - inch meter               | 149 58         | 163 28          | 9 16%           |
| 4 - inch meter               | 249 3          | 272 14          | 9 16%           |
| 6 - inch meter               | 498 6          | 544 27          | 9 16%           |
| 8 - inch meter               | 797 76         | 870 83          | 9 16%           |
| First            400 CF      | 0 166          | 0 181           | 9 04%           |
| Next            6,100 CF     | 2 628          | 2 869           | 9 17%           |
| Next            43,500 CF    | 1 651          | 1 802           | 9 15%           |
| Next            450,000 CF   | 1 234          | 1 347           | 9 16%           |
| Next            1,000,000 CF | 0 944          | 1 030           | 9 11%           |
| All Over 1,500,000 CF        | 0 560          | 0 611           | 9 11%           |
| Ft. Oglethorpe               | 0.766          | 0.836           | 9 14%           |

| <u>Lookout Mountain</u>      |        |        |       |
|------------------------------|--------|--------|-------|
| 5/8 - inch meter             | 10 00  | 10 92  | 9 20% |
| 3/4 - inch meter             | 14 97  | 16 34  | 9 15% |
| 1 - inch meter               | 24 92  | 27 20  | 9 15% |
| 1 1/2 - inch meter           | 49 87  | 54 44  | 9 16% |
| 2 - inch meter               | 79 77  | 87 08  | 9 16% |
| 3 - inch meter               | 149 58 | 163 28 | 9 16% |
| 4 - inch meter               | 249 3  | 272 14 | 9 16% |
| 6 - inch meter               | 498 6  | 544 27 | 9 16% |
| 8 - inch meter               | 797 76 | 870 83 | 9 16% |
| First            400 CF      | 0 616  | 0 672  | 9 09% |
| Next            6,100 CF     | 3 385  | 3 695  | 9 16% |
| Next            43,500 CF    | 2 408  | 2 629  | 9 18% |
| Next            450,000 CF   | 1 684  | 1 838  | 9 14% |
| Next            1,000,000 CF | 1 394  | 1 522  | 9 18% |
| All Over 1,500,000 CF        | 1 010  | 1 103  | 9 21% |

**Tennessee-American Water Company**  
**Summary of Present and Proposed Rates**

| <u>Lakeview</u>                     | <u>Present</u> | <u>Proposed</u> | <u>Increase</u> |
|-------------------------------------|----------------|-----------------|-----------------|
| 5/8 - inch meter                    | 10 00          | 10 92           | 9 20%           |
| 3/4 - inch meter                    | 14 97          | 16 34           | 9 15%           |
| 1 - inch meter                      | 24 92          | 27 20           | 9.15%           |
| 1 1/2 - inch meter                  | 49 87          | 54 44           | 9 16%           |
| 2 - inch meter                      | 79 77          | 87 08           | 9 16%           |
| 3 - inch meter                      | 149 58         | 163 28          | 9.16%           |
| 4 - inch meter                      | 249 3          | 272 14          | 9 16%           |
| 6 - inch meter                      | 498 6          | 544 27          | 9 16%           |
| 8 - inch meter                      | 797 76         | 870 83          | 9 16%           |
| First                   400 CF      | 0 304          | 0 332           | 9 21%           |
| Next                   6,100 CF     | 2.896          | 3 161           | 9 15%           |
| Next                   43,500 CF    | 1.919          | 2 095           | 9 17%           |
| Next                   450,000 CF   | 1.372          | 1 498           | 9 18%           |
| Next                   1,000,000 CF | 1.082          | 1.181           | 9 15%           |
| All Over               1,500,000 CF | 0.698          | 0 762           | 9 17%           |

**Private Fire Service**

|                      |            |            |       |
|----------------------|------------|------------|-------|
| 1 - Inch Service     | \$23 22    | \$25 35    | 9 17% |
| 1 1/2 - Inch Service | \$52.38    | \$57.18    | 9 16% |
| 2 - Inch Service     | \$93 15    | \$101 68   | 9 16% |
| 2 1/2 - Inch Service | \$142 05   | \$155 06   | 9 16% |
| 3 - Inch Service     | \$209 40   | \$228 58   | 9 16% |
| 4 - Inch Service     | \$419 31   | \$457 72   | 9 16% |
| 6 - Inch Service     | \$837 97   | \$914 73   | 9 16% |
| 8 - Inch Service     | \$1,677 36 | \$1,831.01 | 9 16% |
| 10 - Inch Service    | \$2,516 24 | \$2,746.73 | 9 16% |
| 12 - Inch Service    | \$3,355 24 | \$3,662 58 | 9 16% |

**Public Fire Service**

|             |          |   |          |
|-------------|----------|---|----------|
| Ridgeside   | 1,988 94 | - | -100 00% |
| Public Fire | 186 60   | - | -100 00% |

**Tennessee-American Water Company**  
**Summary of Revenues Under Present and Proposed Rates**

| <u>Customer Classification</u> | <u>Present</u>    | <u>Proposed</u>   | <u>Increase</u>  | <u>Percent</u> |
|--------------------------------|-------------------|-------------------|------------------|----------------|
| Residential                    | \$ 13,302,692     | \$ 14,523,425     | \$ 1,220,733     | 9 18%          |
| Commercial                     | 9,464,969         | 10,331,999        | 867,030          | 9 16%          |
| Industrial                     | 3,399,370         | 3,709,977         | 310,607          | 9 14%          |
| Other Public Authority         | 2,500,771         | 2,729,680         | 228,909          | 9 15%          |
| Sales for Resale               | 920,714           | 1,004,862         | 84,148           | 9 14%          |
| Private Fire                   | 1,354,352         | 1,478,415         | 124,063          | 9 16%          |
| Public Fire                    | 897,285           | 0                 | (897,285)        | -100 00%       |
| <br>Total                      | <br>\$ 31,840,153 | <br>\$ 33,778,358 | <br>\$ 1,938,205 | <br>6 1%       |

Tennessee-American Water Company

## Application of Present and Proposed Rates to Billing Determinants

Tennessee-American Water Company

## **Application of Present and Proposed Rates to Billing Determinants**

| Line<br>No. | Description             | Attrition Year at Proposed Rates |            |           |                        |           |          | Attrition Year at Present Rates |         |          |              |         |            |            |
|-------------|-------------------------|----------------------------------|------------|-----------|------------------------|-----------|----------|---------------------------------|---------|----------|--------------|---------|------------|------------|
|             |                         | Per books                        |            |           | Normalized             |           |          | Billing                         |         |          | Billing      |         |            |            |
|             |                         | Billing<br>Determinant           | Rates      | Revenues  | Billing<br>Determinant | Rates     | Revenues | Determinants                    | Rates   | Revenues | Determinants | Rates   | Revenues   |            |
| 1           | Lakeview                | 5/8 - inch meter                 | 32,277     | 10.00     | 322,770                | 32,493    | 10.00    | 324,930                         | 32,550  | 10.00    | 325,500      | \$10.92 | 355,446    |            |
| 2           |                         | 3/4 - inch meter                 | 10         | 14.97     | 150                    | 10        | 14.97    | 150                             | 10      | 14.97    | 150          | 10      | 16.34      | 163        |
| 3           |                         | 1 - inch meter                   | 46         | 24.92     | 1,146                  | 46        | 24.92    | 1,146                           | 46      | 24.92    | 1,146        | 46      | 27.20      | 1,251      |
| 47          | Total Meters            |                                  |            |           |                        |           |          |                                 |         |          |              |         |            |            |
| 48          | 1 1/2 - inch meter      | 0                                | 49.87      | 0         | 0                      | 49.87     | -        | -                               | 49.87   | -        | -            | -       | 54.44      | -          |
| 49          | 2 - inch meter          | 0                                | 79.77      | 0         | 0                      | 79.77     | -        | -                               | 79.77   | -        | -            | -       | 87.08      | -          |
| 50          | 3 - inch meter          | 0                                | 149.58     | 0         | 0                      | 149.58    | -        | -                               | 149.58  | -        | -            | -       | 163.28     | -          |
| 51          | 4 - inch meter          | 0                                | 249.30     | 0         | 0                      | 249.30    | -        | -                               | 249.30  | -        | -            | -       | 272.14     | -          |
| 52          | 6 - inch meter          | 0                                | 498.60     | 0         | 0                      | 498.60    | -        | -                               | 498.60  | -        | -            | -       | 544.27     | -          |
| 53          | 8 - inch meter          | 0                                | 797.76     | 0         | 0                      | 797.76    | -        | -                               | 797.76  | -        | -            | -       | 870.83     | -          |
| 56          | Total                   |                                  |            |           |                        |           |          |                                 |         |          |              |         |            |            |
| 57          |                         |                                  |            |           |                        |           |          |                                 |         |          |              |         |            |            |
| 58          |                         |                                  |            |           |                        |           |          |                                 |         |          |              |         |            |            |
| 59          | Volumetric              |                                  |            |           |                        |           |          |                                 |         |          |              |         |            |            |
| 60          | First                   | 400 CF                           | 107,085    | 0.304     | 32,554                 | 107,949   | 0.304    | 32,816                          | 108,177 | 0.304    | 32,886       | 108,177 | 0.332      | 35,915     |
| 61          | Next                    | 6,100 CF                         | 89,264     | 2.896     | 258,509                | 102,719   | 2.896    | 297,474                         | 102,786 | 2.896    | 297,668      | 102,786 | 3.161      | 324,907    |
| 62          | Next                    | 43,500 CF                        | 1,392      | 19.9      | 2,671                  | 1,392     | 19.9     | 2,671                           | 1,392   | 19.9     | 2,671        | 1,392   | 2.095      | 2,916      |
| 63          | Next                    | 450,000 CF                       | 615        | 1,372     | 844                    | 615       | 1,372    | 844                             | 615     | 1,372    | 844          | 615     | 1,498      | 921        |
| 64          | Next                    | 1,000,000 CF                     | 0          | 1,082     | 0                      | 0         | 1,082    | -                               | -       | 1,082    | -            | -       | 1,181      | -          |
| 65          | All Over                | 1,500,000 CF                     | 0          | 0         | 0                      | 0         | 0        | 0                               | 0       | 0        | 0            | 0       | 0.762      | -          |
| 66          | Total Lakeview          |                                  |            |           |                        |           |          |                                 |         |          |              |         |            |            |
| 67          |                         |                                  |            |           |                        |           |          |                                 |         |          |              |         |            |            |
| 68          | Total Gross             | 4,395,515                        | 12,411,948 | 4,705,187 | 13,239,159             | 4,712,914 |          |                                 |         |          |              |         | 4,712,914  | 14,475,379 |
| 69          | Correction & Allowances | 0                                | 0          | -         | -                      | -         |          |                                 |         |          |              |         | 44,008     | 48,046     |
| 70          | Net Amount              | 4,395,515                        | 12,411,948 | 4,705,187 | 13,239,159             | 4,712,914 |          |                                 |         |          |              |         | 13,302,692 | 14,523,425 |
|             |                         |                                  |            |           |                        |           |          |                                 |         |          |              |         | 4,728,836  |            |

Tennessee-American Water Company

Application of Present and Proposed Rates to Billing Determinants

| Line<br>No. | 2                      | 3            | 4         | 5         | Per books              |           |           |                        | Normalized |           |                         |           | Attrition Year at Present Rates |                         |           |           | Attrition Year at Proposed Rates |           |           |           |   |
|-------------|------------------------|--------------|-----------|-----------|------------------------|-----------|-----------|------------------------|------------|-----------|-------------------------|-----------|---------------------------------|-------------------------|-----------|-----------|----------------------------------|-----------|-----------|-----------|---|
|             |                        |              |           |           | Billing<br>Determinate | Rates     | Revenues  | Billing<br>Determinate | Rates      | Revenues  | Billing<br>Determinants | Rates     | Revenues                        | Billing<br>Determinants | Rates     | Revenues  | Billing<br>Determinants          | Rates     | Revenues  |           |   |
| 1           | COMMERCIAL             | Chattanooga  |           |           | 63,846                 | 8.92      | \$569,506 | 63,846                 | 8.92       | \$569,506 | 63,846                  | 8.92      | \$569,506                       | 63,846                  | 8.92      | \$569,506 | 63,846                           | 8.92      | \$569,506 |           |   |
| 6           | 5/8 - inch meter       |              | 1,272     | 14.97     | 19,042                 | 1,272     | 14.97     | 19,042                 | 1,272      | 14.97     | 19,042                  | 1,272     | 14.97                           | 19,042                  | 1,272     | 14.97     | 19,042                           | 1,272     | 14.97     | 19,042    |   |
| 7           | 3/4 - inch meter       |              | 14,605    | 24.92     | 363,957                | 15,013    | 24.92     | 374,124                | 15,616     | 24.92     | 389,151                 | 15,616    | 24.92                           | 389,151                 | 15,616    | 24.92     | 389,151                          | 15,616    | 24.92     | 389,151   |   |
| 8           | 1 - inch meter         |              | 3,399     | 49.87     | 169,508                | 3,399     | 49.87     | 169,508                | 3,399      | 49.87     | 169,508                 | 3,399     | 49.87                           | 169,508                 | 3,399     | 49.87     | 169,508                          | 3,399     | 49.87     | 169,508   |   |
| 9           | 1 1/2 - inch meter     |              | 8,837     | 79.77     | 704,927                | 8,837     | 79.77     | 704,927                | 8,837      | 79.77     | 704,927                 | 8,837     | 79.77                           | 704,927                 | 8,837     | 79.77     | 704,927                          | 8,837     | 79.77     | 704,927   |   |
| 10          | 2 - inch meter         |              | 466       | 149.58    | 69,704                 | 466       | 149.58    | 69,704                 | 466        | 149.58    | 69,704                  | 466       | 149.58                          | 69,704                  | 466       | 149.58    | 69,704                           | 466       | 149.58    | 69,704    |   |
| 11          | 3 - inch meter         |              | 36        | 249.30    | 8,975                  | 36        | 249.30    | 8,975                  | 36         | 249.30    | 8,975                   | 36        | 249.30                          | 8,975                   | 36        | 249.30    | 8,975                            | 36        | 249.30    | 8,975     |   |
| 12          | 4 - inch meter         |              | 1         | 498.60    | 499                    | 1         | 498.60    | 499                    | 1          | 498.60    | 499                     | 1         | 498.60                          | 499                     | 1         | 498.60    | 499                              | 1         | 498.60    | 499       |   |
| 13          | 6 - inch meter         |              | 1,435     | 210.61    | 302,225                | 1,435     | 210.61    | 302,225                | 1,435      | 210.61    | 302,225                 | 1,435     | 210.61                          | 302,225                 | 1,435     | 210.61    | 302,225                          | 1,435     | 210.61    | 302,225   |   |
| 14          | Master Meters          |              | 1         | 797.76    | 798                    | 1         | 797.76    | 798                    | 1          | 797.76    | 798                     | 1         | 797.76                          | 798                     | 1         | 797.76    | 798                              | 1         | 797.76    | 798       |   |
| 15          | 8 - inch meter         |              | 93,898    | 2,209,141 | 94,906                 | 2,209,141 | 94,906    | 2,209,141              | 94,906     | 2,209,141 | 94,906                  | 2,209,141 | 94,906                          | 2,209,141               | 94,906    | 2,209,141 | 94,906                           | 2,209,141 | 94,906    | 2,209,141 |   |
| 16          | Total Meters           |              |           |           |                        |           |           |                        |            |           |                         |           |                                 |                         |           |           |                                  |           |           |           |   |
| 17          | Volumetric             |              |           |           |                        |           |           |                        |            |           |                         |           |                                 |                         |           |           |                                  |           |           |           |   |
| 18          | First                  | 400 CF       | 271,416   | 0.166     | 45,055                 | 273,048   | 0.166     | 45,326                 | 275,460    | 0.166     | 45,726                  | 275,460   | 0.166                           | 45,726                  | 275,460   | 0.166     | 45,726                           | 275,460   | 0.166     | 45,726    |   |
| 19          | Next                   | 6,100 CF     | 1,235,873 | 2.628     | 3,247,874              | 1,252,315 | 2.628     | 3,29,1084              | 1,276,616  | 2.628     | 3,354,947               | 1,276,616 | 2.628                           | 3,354,947               | 1,276,616 | 2.628     | 3,354,947                        | 1,276,616 | 2.628     | 3,354,947 |   |
| 20          | Next                   | 43,500 CF    | 1,644,114 | 1,651     | 2,714,432              | 1,441,553 | 1,651     | 2,396,514              | 1,451,553  | 1,651     | 2,396,514               | 1,451,553 | 1,651                           | 2,396,514               | 1,451,553 | 1,651     | 2,396,514                        | 1,451,553 | 1,651     | 2,396,514 |   |
| 21          | Next                   | 450,000 CF   | 847,012   | 1,234     | 1,045,213              | 847,012   | 1,234     | 1,045,213              | 847,012    | 1,234     | 1,045,213               | 847,012   | 1,234                           | 1,045,213               | 847,012   | 1,234     | 1,045,213                        | 847,012   | 1,234     | 1,045,213 |   |
| 22          | Next                   | 1,000,000 CF | 47,548    | 0.944     | 44,985                 | 47,548    | 0.944     | 44,985                 | 47,548     | 0.944     | 44,985                  | 47,548    | 0.944                           | 44,985                  | 47,548    | 0.944     | 44,985                           | 47,548    | 0.944     | 44,985    |   |
| 23          | All Over               | 1,500,000 CF | 115,407   | 0.560     | 64,628                 | 115,407   | 0.560     | 64,628                 | 115,407    | 0.560     | 64,628                  | 115,407   | 0.560                           | 64,628                  | 115,407   | 0.560     | 64,628                           | 115,407   | 0.560     | 64,628    |   |
| 24          | Total Chattanooga      |              | 4,161,370 |           | 9,377,228              | 3,986,883 |           | 9,106,988              | 4,013,596  |           | 9,186,248               | 4,013,596 |                                 | 9,186,248               | 4,013,596 |           | 9,186,248                        | 4,013,596 |           | 9,186,248 |   |
| 25          | Lookout Mountain       |              |           |           |                        |           |           |                        |            |           |                         |           |                                 |                         |           |           |                                  |           |           |           |   |
| 27          | 5/8 - inch meter       |              | 605       | 10.00     | 6,050                  | 605       | 10.00     | 6,050                  | 605        | 10.00     | 6,050                   | 605       | 10.00                           | 6,050                   | 605       | 10.00     | 6,050                            | 605       | 10.00     | 6,050     |   |
| 28          | 3/4 - inch meter       |              | 8         | 14.97     | 120                    | 8         | 14.97     | 120                    | 8          | 14.97     | 120                     | 8         | 14.97                           | 120                     | 8         | 14.97     | 120                              | 8         | 14.97     | 120       |   |
| 29          | 1 - inch meter         |              | 224       | 24.92     | 5,582                  | 284       | 24.92     | 5,582                  | 284        | 24.92     | 5,582                   | 284       | 24.92                           | 5,582                   | 284       | 24.92     | 5,582                            | 284       | 24.92     | 5,582     |   |
| 30          | 1 1/2 - inch meter     |              | 33        | 49.87     | 1,646                  | 33        | 49.87     | 1,646                  | 33         | 49.87     | 1,646                   | 33        | 49.87                           | 1,646                   | 33        | 49.87     | 1,646                            | 33        | 49.87     | 1,646     |   |
| 31          | 2 - inch meter         |              | 74        | 79.77     | 5,903                  | 74        | 79.77     | 5,903                  | 74         | 79.77     | 5,903                   | 74        | 79.77                           | 5,903                   | 74        | 79.77     | 5,903                            | 74        | 79.77     | 5,903     |   |
| 32          | 3 - inch meter         |              | 0         | 149.58    | 0                      | 0         | 149.58    | 0                      | 0          | 149.58    | 0                       | 0         | 149.58                          | 0                       | 0         | 149.58    | 0                                | 0         | 149.58    | 0         |   |
| 33          | 4 - inch meter         |              | 0         | 249.30    | 0                      | 0         | 249.30    | 0                      | 0          | 249.30    | 0                       | 0         | 249.30                          | 0                       | 0         | 249.30    | 0                                | 0         | 249.30    | 0         |   |
| 34          | 6 - inch meter         |              | 0         | 498.60    | 0                      | 0         | 498.60    | 0                      | 0          | 498.60    | 0                       | 0         | 498.60                          | 0                       | 0         | 498.60    | 0                                | 0         | 498.60    | 0         |   |
| 35          | Master Meters          |              | 5         | 159.54    | 798                    | 5         | 159.54    | 798                    | 5          | 159.54    | 798                     | 5         | 159.54                          | 798                     | 5         | 159.54    | 798                              | 5         | 159.54    | 798       |   |
| 36          | Total Meters           |              | 949       | 20,099    | 1009                   |           | 20,099    | 1009                   |            | 20,099    | 1009                    |           | 20,099                          | 1009                    |           | 20,099    | 1009                             |           | 20,099    | 1009      |   |
| 37          |                        |              |           |           |                        |           |           |                        |            |           |                         |           |                                 |                         |           |           |                                  |           |           |           |   |
| 38          | Volumetric             |              |           |           |                        |           |           |                        |            |           |                         |           |                                 |                         |           |           |                                  |           |           |           |   |
| 39          | First                  | 400 CF       | 2,883     | 0.616     | 1,776                  | 3,123     | 0.616     | 1,924                  | 3,151      | 0.616     | 1,944                   | 3,151     | 0.616                           | 1,944                   | 3,151     | 0.616     | 1,944                            | 3,151     | 0.616     | 1,944     |   |
| 40          | Next                   | 6,100 CF     | 15,195    | 3,385     | 51,435                 | 17,325    | 3,385     | 58,645                 | 17,574     | 3,385     | 59,488                  | 17,574    | 3,385                           | 59,488                  | 17,574    | 3,385     | 59,488                           | 17,574    | 3,385     | 59,488    |   |
| 41          | Next                   | 43,500 CF    | 13,570    | 2,408     | 32,677                 | 11,799    | 2,408     | 28,412                 | 11,799     | 2,408     | 28,412                  | 11,799    | 2,408                           | 28,412                  | 11,799    | 2,408     | 28,412                           | 11,799    | 2,408     | 28,412    |   |
| 42          | Next                   | 450,000 CF   | 5,809     | 1,684     | 9,782                  | 5,809     | 1,684     | 9,782                  | 5,809      | 1,684     | 9,782                   | 5,809     | 1,684                           | 9,782                   | 5,809     | 1,684     | 9,782                            | 5,809     | 1,684     | 9,782     |   |
| 43          | Next                   | 1,000,000 CF | 0         | 1,394     | 0                      | 1,394     | 0         | 1,394                  | 0          | 1,394     | 0                       | 1,394     | 0                               | 1,394                   | 0         | 1,394     | 0                                | 1,394     | 0         | 1,394     | 0 |
| 44          | All Over               | 1,500,000 CF | 0         | 1,010     | 0                      | 0         | 1,010     | 0                      | 0          | 1,010     | 0                       | 0         | 1,010                           | 0                       | 0         | 1,010     | 0                                | 0         | 1,010     | 0         |   |
| 45          | Total Lookout Mountain |              | 37,457    | 115,769   | 380,056                |           | 115,769   | 380,056                |            | 115,769   | 380,056                 |           | 115,769                         | 380,056                 |           | 115,769   | 380,056                          |           | 115,769   | 380,056   |   |
| 46          |                        |              |           |           |                        |           |           |                        |            |           |                         |           |                                 |                         |           |           |                                  |           |           |           |   |

Tennessee-American Water Company

## **Application of Present and Proposed Rates to Billing Determinants**

| Line<br>No. | Description             | Attrition Year at Proposed Rates |           |           |             |           |           | Attrition Year at Present Rates |           |          |              |         |            |       |
|-------------|-------------------------|----------------------------------|-----------|-----------|-------------|-----------|-----------|---------------------------------|-----------|----------|--------------|---------|------------|-------|
|             |                         | Per books                        |           |           | Normalized  |           |           | Billing                         |           |          | Billing      |         |            |       |
|             |                         | Billing<br>Determinate           | Rates     | Revenues  | Determinate | Rates     | Revenues  | Determinants                    | Rates     | Revenues | Determinants | Rates   | Revenues   |       |
| 1           | Lakeview                | 1,934                            | 10.00     | 19,340    | 1,934       | 10.00     | 19,340    | 1,934                           | 10.00     | 19,340   | 1,934        | \$10.92 | 21,119     |       |
| 2           | 5/8 - inch meter        | 0                                | 14.97     | 0         | 0           | 14.97     | -         | -                               | 14.97     | -        | -            | 16.34   | -          |       |
| 3           | 3/4 - inch meter        | 210                              | 24.92     | 5,233     | 198         | 24.92     | 4,934     | 212                             | 24.92     | 5,233    | 212          | 27.20   | 5,766      |       |
| 4           | 1 - inch meter          | 0                                | 49.87     | 0         | 0           | 49.87     | -         | -                               | 49.87     | -        | -            | 54.44   | -          |       |
| 5           | 1 1/2 - inch meter      | 0                                | 106       | 79.77     | 8,456       | 106       | 79.77     | 8,456                           | 106       | 79.77    | 8,456        | 106     | 87.08      | 9,230 |
| 6           | 2 - inch meter          | 0                                | 149.58    | 0         | 0           | 149.58    | -         | -                               | 149.58    | -        | -            | 163.28  | -          |       |
| 7           | 3 - inch meter          | 0                                | 249.30    | 0         | 0           | 249.30    | -         | -                               | 249.30    | -        | -            | 272.14  | -          |       |
| 8           | 4 - inch meter          | 0                                | 498.60    | 0         | 0           | 498.60    | -         | -                               | 498.60    | -        | -            | 544.27  | -          |       |
| 9           | 6 - inch meter          | 0                                | 797.76    | 0         | 0           | 797.76    | -         | -                               | 797.76    | -        | -            | 870.83  | -          |       |
| 10          | Total Meters            | 2,250                            | 33,029    | 2238      | 32,730      | 2,252     | 33,079    | 2,252                           | 32,730    | 2,252    | 2,252        | 36,115  | -          |       |
| 11          | Volumetric              | 6,353                            | 0.304     | 1,931     | 6,305       | 0.304     | 1,917     | 6,361                           | 0.304     | 1,934    | 6,361        | 0.332   | 2,112      |       |
| 12          | First                   | 400 CF                           | 16.271    | 2,896     | 52,913      | 16.121    | 2,896     | 52,478                          | 16,296    | 52,955   | 18,296       | 3,161   | 57,834     |       |
| 13          | 6,100 CF                | 10,599                           | 1.919     | 20,339    | 8,848       | 1.919     | 16,979    | 8,388                           | 1.919     | 16,097   | 8,388        | 2,095   | 17,573     |       |
| 14          | 43,500 CF               | 1,824                            | 1,372     | 2,503     | 1,824       | 1,372     | 2,503     | 1,824                           | 1,372     | 2,503    | 1,824        | 1,498   | 2,732      |       |
| 15          | 450,000 CF              | 0                                | 1,082     | 0         | 0           | 1,082     | -         | -                               | 1,082     | -        | -            | 1,181   | -          |       |
| 16          | Next                    | 1,000,000 CF                     | 0         | 0         | 0           | 0         | 0         | 0                               | 0         | 0        | 0            | 0       | 0          |       |
| 17          | All Over                | 1,500,000 CF                     | 37,047    | 110,715   | 35098       | 37,047    | 110,607   | 34,889                          | 37,047    | 106,588  | 34,869       | -       | 116,366    |       |
| 18          | Total Lakeview          | 67                               | 9,597,712 | 4,060,037 | 9,333,922   | 4,086,798 | 9,414,238 | 4,086,798                       | 9,414,238 | 50,731   | 4,108,961    | 2,289   | 10,276,636 |       |
| 19          | Total Gross             | 68                               | 4,235,874 | 4,235,874 | 9,333,922   | 4,086,798 | 9,414,238 | 4,086,798                       | 9,414,238 | 50,731   | 4,108,961    | 2,289   | 55,363     |       |
| 20          | Correction & Allowances | 69                               | 9,597,712 | 4,060,037 | 9,333,922   | 4,086,798 | 9,414,238 | 4,086,798                       | 9,414,238 | 50,731   | 4,108,961    | 2,289   | 10,331,999 |       |
| 21          | Net Amount              | 70                               | 4,235,874 | 4,235,874 | 9,333,922   | 4,086,798 | 9,414,238 | 4,086,798                       | 9,414,238 | 50,731   | 4,108,961    | 2,289   | 55,363     |       |

Tennessee American Water Company

Application of Present and Proposed Rates to Billing Determinants

| Line No. | Description            | Attribution Year at Present Rates |           |                     |            | Attribution Year at Proposed Rates |              |           |              |
|----------|------------------------|-----------------------------------|-----------|---------------------|------------|------------------------------------|--------------|-----------|--------------|
|          |                        | Billing Determinate               | Per books | Billing Determinate | Normalized | Billing Determinants               | Determinants | Billing   | Determinants |
| 2        | INDUSTRIAL             |                                   |           |                     |            |                                    |              |           |              |
| 3        | Chattanooga            |                                   |           |                     |            |                                    |              |           |              |
| 6        | 5/8 - inch meter       | 322                               | 8.92      | \$2,872             | 322        | 8.92                               | \$2,872      | 322       | \$9.74       |
| 7        | 3/4 - inch meter       | 33                                | 14.97     | 494                 | 33         | 14.97                              | 494          | 33        | 16.34        |
| 8        | 1 - inch meter         | 321                               | 24.92     | 7,999               | 321        | 24.92                              | 7,999        | 321       | 27.20        |
| 9        | 1 1/2 - inch meter     | 51                                | 49.87     | 2,543               | 51         | 49.87                              | 2,543        | 51        | 54.44        |
| 10       | 2 - inch meter         | 435                               | 79.77     | 34,780              | 436        | 79.77                              | 34,780       | 436       | 37.967       |
| 11       | 3 - inch meter         | 149.58                            | 0         | 0                   | 149.58     | -                                  | 149.58       | -         | 163.28       |
| 12       | 4 - inch meter         | 47                                | 249.30    | 11,717              | 47         | 249.30                             | 11,717       | 47        | 272.14       |
| 13       | 6 - inch meter         | 0                                 | 498.60    | 0                   | 0          | 498.60                             | 0            | -         | 544.27       |
| 14       | Master Meters          | 425                               | 375.92    | 159,766             | 425        | 375.92                             | 159,766      | 425       | 410.35       |
| 15       | Total Meters           | 0                                 | 797.76    | 0                   | 0          | 797.76                             | 0            | -         | 870.83       |
| 16       |                        | 1,635                             |           | 220,171             | 1,635      |                                    | 220,171      | 1,635     | 240,339      |
| 17       | Volumetric             |                                   |           |                     |            |                                    |              |           |              |
| 18       | First                  | 400 CF                            | 5,749     | 0.166               | 954        | 5,749                              | 0.166        | 954       | 5,749        |
| 19       | Next                   | 6,100 CF                          | 57,759    | 2,628               | 151,791    | 57,759                             | 2,628        | 151,791   | 57,759       |
| 20       | Next                   | 43,500 CF                         | 257,082   | 1,651               | 424,442    | 257,082                            | 1,651        | 424,442   | 257,082      |
| 21       | Next                   | 450,000 CF                        | 1,046,158 | 1,234               | 1,280,959  | 1,046,158                          | 1,234        | 1,280,959 | 1,046,158    |
| 22       | Next                   | 1,000,000 CF                      | 874,888   | 0.944               | 825,894    | 874,888                            | 0.944        | 825,894   | 874,888      |
| 23       | All Over               | 1,500,000 CF                      | 701,134   | 0.560               | 392,635    | 701,134                            | 0.560        | 392,635   | 701,134      |
| 24       | Total Chattanooga      |                                   | 2,942,770 | 3,306,846           | 2,942,770  | 3,306,846                          | 2,942,770    | 3,306,846 | 2,942,770    |
| 25       |                        |                                   |           |                     |            |                                    |              |           | 3,609,056    |
| 26       | Lookout Mountain       |                                   |           |                     |            |                                    |              |           |              |
| 27       | 5/8 - inch meter       | 0                                 | 10.00     | 0                   | 0          | 10.00                              | 0            | 10.00     | -            |
| 28       | 3/4 - inch meter       | 0                                 | 14.97     | 0                   | 0          | 14.97                              | 0            | 14.97     | -            |
| 29       | 1 - inch meter         | 0                                 | 24.92     | 0                   | 0          | 24.92                              | 0            | 24.92     | -            |
| 30       | 1 1/2 - inch meter     | 0                                 | 49.87     | 0                   | 0          | 49.87                              | 0            | 49.87     | -            |
| 31       | 2 - inch meter         | 0                                 | 79.77     | 0                   | 0          | 79.77                              | 0            | 79.77     | -            |
| 32       | 3 - inch meter         | 0                                 | 149.58    | 0                   | 0          | 149.58                             | 0            | 149.58    | -            |
| 33       | 4 - inch meter         | 0                                 | 249.30    | 0                   | 0          | 249.30                             | 0            | 249.30    | -            |
| 34       | 6 - inch meter         | 0                                 | 498.60    | 0                   | 0          | 498.60                             | 0            | 498.60    | -            |
| 35       | 8 - inch meter         | 0                                 | 797.76    | 0                   | 0          | 797.76                             | 0            | 797.76    | -            |
| 36       | Total Meters           | 0                                 | 0         | 0                   | 0          | 0                                  | 0            | 0         | -            |
| 37       |                        |                                   |           |                     |            |                                    |              |           |              |
| 38       | Volumetric             |                                   |           |                     |            |                                    |              |           |              |
| 39       | First                  | 400 CF                            | 0         | 0.616               | 0          | 0.616                              | 0            | 0.616     | -            |
| 40       | Next                   | 6,100 CF                          | 0         | 3,385               | 0          | 3,385                              | 0            | 3,385     | -            |
| 41       | Next                   | 43,500 CF                         | 0         | 2,408               | 0          | 2,408                              | 0            | 2,408     | -            |
| 42       | Next                   | 450,000 CF                        | 0         | 1,684               | 0          | 1,684                              | 0            | 1,684     | -            |
| 43       | Next                   | 1,000,000 CF                      | 0         | 1,394               | 0          | 1,394                              | 0            | 1,394     | -            |
| 44       | All Over               | 1,500,000 CF                      | 0         | 1,010               | 0          | 1,010                              | 0            | 1,010     | -            |
| 45       | Total Lookout Mountain |                                   | 0         | 0                   | 0          | 0                                  | 0            | 0         | -            |

Tennessee-American Water Company

## Application of Present and Proposed Rates to Billing Determinants

| Line<br>No. | Description             | Attribution Year at Proposed Rates |              |           |                                    |           |           |
|-------------|-------------------------|------------------------------------|--------------|-----------|------------------------------------|-----------|-----------|
|             |                         | Attribution Year at Present Rates  |              |           | Attribution Year at Proposed Rates |           |           |
|             |                         | Billing                            | Determinants | Billing   | Determinants                       | Rates     | Revenues  |
| Billing     | Determinant             | Per books                          | Revenue      | Billing   | Normalized                         |           |           |
| Determinant | Rates                   | Revenue                            | Determinant  | Rates     | Revenues                           |           |           |
| Determinant | Rates                   | Revenue                            | Determinant  | Rates     | Revenues                           |           |           |
| 1           | Lakeview                |                                    |              |           |                                    |           |           |
| 2           | 5/8 - inch meter        | 0                                  | 10.00        | 0         | 10.00                              | 0         | 10.00     |
| 48          | 3/4 - inch meter        | 0                                  | 14.97        | 0         | 14.97                              | 0         | 14.97     |
| 49          | 1 - inch meter          | 0                                  | 24.92        | 0         | 24.92                              | 0         | 24.92     |
| 50          | 1 1/2 - inch meter      | 0                                  | 49.87        | 0         | 49.87                              | 0         | 49.87     |
| 51          | 2 - inch meter          | 0                                  | 79.77        | 0         | 79.77                              | 0         | 79.77     |
| 52          | 3 - inch meter          | 0                                  | 149.58       | 0         | 149.58                             | 0         | 149.58    |
| 53          | 4 - inch meter          | 0                                  | 249.30       | 0         | 249.30                             | 0         | 249.30    |
| 54          | 6 - inch meter          | 0                                  | 498.60       | 0         | 498.60                             | 0         | 498.60    |
| 55          | 8 - inch meter          | 0                                  | 797.76       | 0         | 797.76                             | 0         | 797.76    |
| 56          | Total Meters            | 0                                  | 0            | 0         | 0                                  | 0         | 0         |
| 57          |                         |                                    |              |           |                                    |           |           |
| 58          |                         |                                    |              |           |                                    |           |           |
| 59          | Volumetric              |                                    |              |           |                                    |           |           |
| 60          | First                   | 400 CF                             | 0            | 0.304     | 0                                  | 0.304     | 0         |
| 61          | Next                    | 6,100 CF                           | 0            | 2.896     | 0                                  | 2.896     | 0         |
| 62          | Next                    | 43,500 CF                          | 0            | 1.919     | 0                                  | 1.919     | 0         |
| 63          | Next                    | 450,000 CF                         | 0            | 1.372     | 0                                  | 1.372     | 0         |
| 64          | Next                    | 1,000,000 CF                       | 0            | 1.082     | 0                                  | 1.082     | 0         |
| 65          | All Over                | 1,500,000 CF                       | 0            | 0.698     | 0                                  | 0.698     | 0         |
| 66          | Total Lakeview          | 0                                  | 0            | 0         | 0                                  | 0         | 0         |
| 67          |                         |                                    |              |           |                                    |           |           |
| 68          | Total Gross             | 2,942,770                          | 3,306,846    | 2,942,770 | 3,306,846                          | 2,942,770 | 3,306,846 |
| 69          | Correction & Allowances |                                    |              |           |                                    |           |           |
| 70          | Net Amount              | 2,942,770                          | 3,306,846    | 2,942,770 | 3,306,846                          | 2,942,770 | 3,306,846 |

## Tennessee American Water Company

## Application of Present and Proposed Rates to Billing Determinants

| Line<br>No. | Description            | Attrition Year at Present Rates |                |                  |                   |                      |                  | Attrition Year at Proposed Rates |                |                      |              |                      |                  |   |
|-------------|------------------------|---------------------------------|----------------|------------------|-------------------|----------------------|------------------|----------------------------------|----------------|----------------------|--------------|----------------------|------------------|---|
|             |                        | Per Books                       |                | Normalized       |                   | Billing Determinants |                  | Billing Determinants             |                | Billing Determinants |              | Billing Determinants |                  |   |
|             |                        | Billing Determine               | Rates          | Revenues         | Billing Determine | Rates                | Revenues         | Billing                          | Determinants   | Rates                | Revenues     | Billing              | Determinants     |   |
| 1           | OTHER PUBLIC AUTHORITY |                                 |                |                  |                   |                      |                  |                                  |                |                      |              |                      |                  |   |
| 2           | Chattanooga            | 1,953                           | 8.92           | \$17,421         | 1,953             | 8.92                 | \$17,421         | 1,953                            | 8.92           | \$17,421             | 1,953        | 8.92                 | \$19,022         |   |
| 3           | 5/8 - inch meter       | 141                             | 14.97          | 2,111            | 141               | 14.97                | 2,111            | 141                              | 14.97          | 2,111                | 141          | 14.97                | 2,304            |   |
| 4           | 3/4 - inch meter       | 1,491                           | 24.92          | 37,156           | 1,479             | 24.92                | 36,857           | 1,531                            | 24.92          | 38,153               | 1,531        | 27.20                | 41,643           |   |
| 5           | 1 - inch meter         | 609                             | 49.87          | 30,371           | 609               | 49.87                | 30,371           | 609                              | 49.87          | 30,371               | 609          | 54.44                | 33,154           |   |
| 6           | 1 1/2 - inch meter     | 1,943                           | 79.77          | 154,993          | 1,943             | 79.77                | 154,993          | 1,943                            | 79.77          | 154,993              | 1,943        | 87.08                | 169,196          |   |
| 7           | 2 - inch meter         | 28                              | 149.58         | 4,188            | 28                | 149.58               | 4,188            | 28                               | 149.58         | 4,188                | 28           | 163.28               | 4,572            |   |
| 8           | 3 - inch meter         | 92                              | 249.30         | 22,936           | 92                | 249.30               | 22,936           | 92                               | 249.30         | 22,936               | 92           | 272.14               | 25,037           |   |
| 9           | 4 - inch meter         | 0                               | 498.60         | 0                | 0                 | 498.60               | 0                | 498.60                           | 0              | 498.60               | 0            | 544.27               | -                |   |
| 10          | 6 - inch meter         | 684                             | 208.24         | 142,436          | 684               | 208.24               | 142,436          | 684                              | 208.24         | 142,436              | 684          | 227.31               | 155,480          |   |
| 11          | Master Meters          | 0                               | 797.76         | 0                | 0                 | 797.76               | 0                | 797.76                           | 0              | 797.76               | 0            | 870.83               | -                |   |
| 12          | Total Meters           | <u>6,941</u>                    | <u>411,612</u> | <u>6939</u>      |                   | <u>411,313</u>       | <u>6,981</u>     |                                  | <u>412,609</u> | <u>6,981</u>         |              | <u>450,408</u>       |                  |   |
| 13          | Volumetric             |                                 |                |                  |                   |                      |                  |                                  |                |                      |              |                      |                  |   |
| 14          | First                  | 400 CF                          | 20,537         | 0 166            | 3,409             | 20,489               | 0 166            | 3,401                            | 20,697         | 0 166                | 3,436        | 20,697               | 0,181            |   |
| 15          | Next                   | 6,100 CF                        | 169,537        | 2,628            | 445,543           | 168,805              | 2,628            | 443,620                          | 179,361        | 2,628                | 471,361      | 179,361              | 2,869            |   |
| 16          | Next                   | 43,500 CF                       | 396,539        | 1,651            | 654,686           | 394,871              | 1,651            | 651,932                          | 394,871        | 1,651                | 651,932      | 394,871              | 1,802            |   |
| 17          | Next                   | 450,000 CF                      | 639,924        | 1,234            | 789,666           | 639,924              | 1,234            | 789,666                          | 639,924        | 1,234                | 789,666      | 639,924              | 1,347            |   |
| 18          | Next                   | 1,000,000 CF                    | 125,661        | 0 944            | 118,624           | 125,661              | 0 944            | 118,624                          | 125,661        | 0 944                | 118,624      | 125,661              | 1,030            |   |
| 19          | All Over               | 1,500,000 CF                    | 84,640         | 0 560            | 47,398            | 84,640               | 0 560            | 47,398                           | 84,640         | 0 560                | 47,398       | 84,640               | 0 611            |   |
| 20          | Total Chattanooga      | <u>1,436,838</u>                |                | <u>2,470,938</u> | <u>143,4390</u>   |                      | <u>2,465,954</u> | <u>1,445,154</u>                 |                | <u>2,495,026</u>     |              | <u>1,445,154</u>     | <u>2,723,423</u> |   |
| 21          | Lookout Mountain       |                                 |                |                  |                   |                      |                  |                                  |                |                      |              |                      |                  |   |
| 22          | 5/8 - inch meter       | 114                             | 10.00          | 1,140            | 114               | 10.00                | 1,140            | 114                              | 10.00          | 1,140                | 114          | 10.92                | 1,245            |   |
| 23          | 3/4 - inch meter       | 0                               | 14.97          | 0                | 0                 | 14.97                | 0                | 14.97                            | 0              | 14.97                | 0            | 16.34                | -                |   |
| 24          | 1 - inch meter         | 94                              | 24.92          | 2,342            | 94                | 24.92                | 2,342            | 94                               | 24.92          | 2,342                | 94           | 27.20                | 2,557            |   |
| 25          | 1 1/2 - inch meter     | 11                              | 49.87          | 549              | 11                | 49.87                | 549              | 11                               | 49.87          | 549                  | 11           | 54.44                | 599              |   |
| 26          | 2 - inch meter         | 70                              | 79.77          | 5,584            | 70                | 79.77                | 5,584            | 70                               | 79.77          | 5,584                | 70           | 87.08                | 6,096            |   |
| 27          | 3 - inch meter         | 0                               | 149.58         | 0                | 0                 | 149.58               | 0                | 149.58                           | 0              | 149.58               | 0            | 163.28               | -                |   |
| 28          | 4 - inch meter         | 0                               | 249.30         | 0                | 0                 | 249.30               | 0                | 249.30                           | 0              | 249.30               | 0            | 272.14               | -                |   |
| 29          | 6 - inch meter         | 0                               | 498.60         | 0                | 0                 | 498.60               | 0                | 498.60                           | 0              | 498.60               | 0            | 544.27               | -                |   |
| 30          | 8 - inch meter         | 0                               | 797.76         | 0                | 0                 | 797.76               | 0                | 797.76                           | 0              | 797.76               | 0            | 870.83               | -                |   |
| 31          | Total Meters           | <u>289</u>                      |                | <u>9,615</u>     | <u>289</u>        |                      | <u>9,615</u>     | <u>289</u>                       |                | <u>9,615</u>         | <u>289</u>   | <u>10,497</u>        |                  |   |
| 32          | Volumetric             |                                 |                |                  |                   |                      |                  |                                  |                |                      |              |                      |                  |   |
| 33          | First                  | 400 CF                          | 657            | 0 616            | 405               | 657                  | 0 616            | 405                              | 657            | 0 616                | 405          | 657                  | 0 672            |   |
| 34          | Next                   | 6,100 CF                        | 14,376         | 3,385            | 4,247             | 14,376               | 3,385            | 4,247                            | 14,376         | 3,385                | 4,247        | 14,376               | 442              |   |
| 35          | Next                   | 43,500 CF                       | 2,560          | 2,408            | 6,164             | 2,560                | 2,408            | 6,164                            | 2,560          | 2,408                | 6,164        | 2,560                | 5,693            |   |
| 36          | Next                   | 450,000 CF                      | 0              | 1,684            | 0                 | 0                    | 1,684            | 0                                | 1,684          | 0                    | 1,684        | 0                    | 1,838            | - |
| 37          | Next                   | 1,000,000 CF                    | 0              | 1,394            | 0                 | 0                    | 1,394            | 0                                | 1,394          | 0                    | 1,394        | 0                    | 1,522            | - |
| 38          | All Over               | 1,500,000 CF                    | 0              | 1,010            | 0                 | 0                    | 1,010            | 0                                | 1,010          | 0                    | 1,010        | 0                    | 1,103            | - |
| 39          | Total Lookout Mountain | <u>7,464</u>                    |                | <u>30,560</u>    | <u>7464</u>       |                      | <u>30,560</u>    | <u>7,464</u>                     |                | <u>30,560</u>        | <u>7,464</u> |                      | <u>33,362</u>    |   |

Tennessee-American Water Company

Application of Present and Proposed Rates to Billing Determinants

| Line<br>No. | Description             | Per Books              |           | Normalized |             | Addition Year at Present Rates |           | Attrition Year at Proposed Rates |           |
|-------------|-------------------------|------------------------|-----------|------------|-------------|--------------------------------|-----------|----------------------------------|-----------|
|             |                         | Billing<br>Determinate | Rates     | Revenues   | Determinate | Rates                          | Revenues  | Determinants                     | Rates     |
| 47          | Lakeview                | 44                     | 10.00     | 440        | 44          | 10.00                          | 440       | 44                               | \$10.92   |
| 48          | 5/8 - inch meter        | 0                      | 14.97     | 0          | 0           | 14.97                          | -         | 14.97                            | -         |
| 49          | 3/4 - inch meter        | 12                     | 24.92     | 299        | 12          | 24.92                          | 299       | 12                               | 27.20     |
| 50          | 1 - inch meter          | 8                      | 49.87     | 399        | 8           | 49.87                          | 399       | 8                                | 54.44     |
| 51          | 1 1/2 - inch meter      | 24                     | 79.77     | 1,914      | 24          | 79.77                          | 1,914     | 24                               | 87.08     |
| 52          | 2 - inch meter          | 0                      | 149.58    | 0          | 0           | 149.58                         | -         | 149.58                           | -         |
| 53          | 3 - inch meter          | 0                      | 249.30    | 0          | 0           | 249.30                         | -         | 249.30                           | -         |
| 54          | 4 - inch meter          | 0                      | 498.60    | 0          | 0           | 498.60                         | -         | 498.60                           | -         |
| 55          | 6 - inch meter          | 0                      | 797.76    | 0          | 0           | 797.76                         | -         | 797.76                           | -         |
| 56          | 8 - inch meter          | 88                     | 3,052     | 88         | 88          | 3,052                          | 88        | 3,052                            | 88        |
| 57          | Total Meters            |                        |           |            |             |                                |           |                                  |           |
| 58          | Volumetric              |                        |           |            |             |                                |           |                                  |           |
| 60          | First                   | 400 CF                 | 199       | 0.304      | 60          | 199                            | 0.304     | 60                               | 199       |
| 61          | Next                    | 6,100 CF               | 1,726     | 2,896      | 4,998       | 1,726                          | 2,896     | 4,998                            | 1,726     |
| 62          | Next                    | 43,500 CF              | 1,092     | 1,919      | 2,096       | 1,092                          | 1,919     | 2,096                            | 1,092     |
| 63          | Next                    | 450,000 CF             | 0         | 1,372      | 0           | 1,372                          | -         | 1,372                            | -         |
| 64          | Next                    | 1,000,000 CF           | 0         | 1,082      | 0           | 1,082                          | -         | 1,082                            | -         |
| 65          | All Over                | 1,500,000 CF           | 0         | 0.698      | 0           | 0.698                          | -         | 0.698                            | -         |
| 66          | Total Lakeview          |                        |           | 10,206     | 3017        | 10,206                         | 3,017     | 10,206                           | 3,017     |
| 67          | Total Gross             | 1,447,319              | 2,511,704 | 1444871    | 2,506,720   | 1,455,635                      | 2,535,792 | 1,455,635                        | 2,767,927 |
| 68          | Correction & Allowances |                        |           |            | (20,290)    | (35,021)                       | (20,290)  | (35,021)                         | (38,247)  |
| 69          | Net Amount              | 1,447,319              | 2,511,704 | 1444871    | 2,506,720   | 1,435,345                      | 2,500,771 | 1,435,345                        | 2,729,680 |

## Tennessee-American Water Company

## Application of Present and Proposed Rates to Billing Determinants

| Line<br>No. | Description            | Attrition Year at Present Rates |           |                        |            |                        |          | Attrition Year at Proposed Rates |          |        |          |           |          |
|-------------|------------------------|---------------------------------|-----------|------------------------|------------|------------------------|----------|----------------------------------|----------|--------|----------|-----------|----------|
|             |                        | Billing<br>Determinate          | Per books | Billing<br>Determinate | Normalized | Billing<br>Determinate | Revenues | Billing<br>Determinate           | Revenues | Rates  | Revenues | Rates     | Revenues |
| 2           | SALES FOR RESALE       |                                 |           |                        |            |                        |          |                                  |          |        |          |           |          |
| 3           | Chattanooga            |                                 |           |                        |            |                        |          |                                  |          |        |          |           |          |
| 4           | 5/8 - inch meter       | 0                               | 8.92      | \$0                    | 0          | 8.92                   | \$0      | -                                | 8.92     | \$0    | 0        | \$9.74    | \$0      |
| 5           | 3/4 - inch meter       | 0                               | 14.97     | 0                      | 0          | 14.97                  | 0        | -                                | 14.97    | -      | 16.34    | -         | -        |
| 6           | 1 - inch meter         | 0                               | 24.92     | 0                      | 0          | 24.92                  | -        | -                                | 24.92    | -      | 27.20    | -         | -        |
| 7           | 1 1/2 - inch meter     | 0                               | 49.87     | 0                      | 0          | 49.87                  | -        | -                                | 49.87    | -      | 54.44    | -         | -        |
| 8           | 2 - inch meter         | 12                              | 79.77     | 957                    | 12         | 79.77                  | 957      | 12                               | 79.77    | 957    | 12       | 87.08     | 1,045    |
| 9           | 3 - Inch meter         | 0                               | 149.58    | 0                      | 0          | 149.58                 | -        | -                                | 149.58   | -      | 163.28   | -         | -        |
| 10          | 4 - inch meter         | 37                              | 249.30    | 9,224                  | 37         | 249.30                 | 9,224    | 37                               | 249.30   | 9,224  | 37       | 272.14    | 10,069   |
| 11          | 6 - inch meter         | 0                               | 498.60    | 0                      | 0          | 498.60                 | -        | -                                | 498.60   | -      | 544.27   | -         | -        |
| 12          | Master Meters          | 34                              | 804.21    | 27,343                 | 34         | 804.21                 | 27,343   | 34                               | 804.21   | 27,343 | 34       | 877.88    | 29,848   |
| 13          | Total Meters           | 83                              | 37,524    | 83                     | 83         | 37,524                 | 83       | 83                               | 37,524   | 83     | 83       | 40,962    | -        |
| 14          |                        |                                 |           |                        |            |                        |          |                                  |          |        |          |           |          |
| 15          |                        |                                 |           |                        |            |                        |          |                                  |          |        |          |           |          |
| 16          | Volumetric             |                                 |           |                        |            |                        |          |                                  |          |        |          |           |          |
| 17          | First                  | 400 CF                          | 0         | 0                      | 0          | 0                      | 0        | 0                                | 0        | 0      | 0        | 0         | 0        |
| 18          | Next                   | 6,100 CF                        | 0         | 2,628                  | 0          | 0                      | 2,628    | -                                | -        | 2,628  | -        | 2,869     | -        |
| 19          | Next                   | 43,500 CF                       | 0         | 1,651                  | 0          | 0                      | 1,651    | -                                | -        | 1,651  | -        | 1,802     | -        |
| 20          | Next                   | 450,000 CF                      | 0         | 1,234                  | 0          | 0                      | 1,234    | -                                | -        | 1,234  | -        | 1,347     | -        |
| 21          | Next                   | 1,000,000 CF                    | 0         | 0                      | 0          | 0                      | 0        | 0                                | 0        | 0      | -        | 1,030     | -        |
| 22          | All Over               | 1,500,000 CF                    | 0         | 0                      | 0          | 0                      | 0        | 0                                | 0        | 0      | 0        | 0         | 0        |
| 23          | Ft Oglethorpe          | 1,178,392                       | 902,648   | 1,178,392              | 0          | 0                      | 0        | 0                                | 0        | 0      | 0        | 0         | 0        |
| 24          | Total Chattanooga      | 1,178,392                       | 940,172   | 1,178,392              | 0          | 0                      | 902,648  | 1,178,392                        | 0        | 0      | 902,648  | 1,178,392 | 940,172  |
| 25          |                        |                                 |           |                        |            |                        |          |                                  |          |        |          |           |          |
| 26          | Lookout Mountain       |                                 |           |                        |            |                        |          |                                  |          |        |          |           |          |
| 27          | 5/8 - inch meter       | 0                               | 10.00     | 0                      | 0          | 0                      | 10.00    | -                                | -        | 10.00  | -        | 10.92     | -        |
| 28          | 3/4 - inch meter       | 0                               | 14.97     | 0                      | 0          | 0                      | 14.97    | -                                | -        | 14.97  | -        | 16.34     | -        |
| 29          | 1 - inch meter         | 0                               | 24.92     | 0                      | 0          | 0                      | 24.92    | -                                | -        | 24.92  | -        | 27.20     | -        |
| 30          | 1 1/2 - inch meter     | 0                               | 49.87     | 0                      | 0          | 0                      | 49.87    | -                                | -        | 49.87  | -        | 54.44     | -        |
| 31          | 2 - inch meter         | 0                               | 79.77     | 0                      | 0          | 0                      | 79.77    | -                                | -        | 79.77  | -        | 87.08     | -        |
| 32          | 3 - inch meter         | 0                               | 149.58    | 0                      | 0          | 0                      | 149.58   | -                                | -        | 149.58 | -        | 163.28    | -        |
| 33          | 4 - inch meter         | 0                               | 249.30    | 0                      | 0          | 0                      | 249.30   | -                                | -        | 249.30 | -        | 272.14    | -        |
| 34          | 6 - inch meter         | 0                               | 498.60    | 0                      | 0          | 0                      | 498.60   | -                                | -        | 498.60 | -        | 544.27    | -        |
| 35          | 8 - inch meter         | 0                               | 0         | 0                      | 0          | 0                      | 0        | -                                | -        | -      | -        | -         | -        |
| 36          | Total Meters           | 0                               | 0         | 0                      | 0          | 0                      | 0        | -                                | -        | -      | -        | -         | -        |
| 37          |                        |                                 |           |                        |            |                        |          |                                  |          |        |          |           |          |
| 38          | Volumetric             |                                 |           |                        |            |                        |          |                                  |          |        |          |           |          |
| 39          | First                  | 400 CF                          | 0         | 0                      | 0          | 0                      | 0        | 0                                | 0        | 0      | 0        | 0         | 0        |
| 40          | Next                   | 6,100 CF                        | 0         | 3,385                  | 0          | 0                      | 3,385    | -                                | -        | 3,385  | -        | 3,695     | -        |
| 41          | Next                   | 43,500 CF                       | 0         | 2,408                  | 0          | 0                      | 2,408    | -                                | -        | 2,408  | -        | 2,629     | -        |
| 42          | Next                   | 450,000 CF                      | 0         | 1,684                  | 0          | 0                      | 1,684    | -                                | -        | 1,684  | -        | 1,838     | -        |
| 43          | Next                   | 1,000,000 CF                    | 0         | 1,394                  | 0          | 0                      | 1,394    | -                                | -        | 1,394  | -        | 1,522     | -        |
| 44          | All Over               | 1,500,000 CF                    | 0         | 1,010                  | 0          | 0                      | 1,010    | -                                | -        | 1,010  | -        | 1,103     | -        |
| 45          | Total Lookout Mountain | 0                               | 0         | 0                      | 0          | 0                      | 0        | -                                | -        | -      | -        | -         | -        |
| 46          |                        |                                 |           |                        |            |                        |          |                                  |          |        |          |           |          |

Tennessee-American Water Company

Application of Present and Proposed Rates to Billing Determinants

| Line<br>No. | Description             | Per Books              |         |           | Normalized             |           |          | Attrition Year at Present Rates |         |           | Attrition Year at Proposed Rates |           |           |
|-------------|-------------------------|------------------------|---------|-----------|------------------------|-----------|----------|---------------------------------|---------|-----------|----------------------------------|-----------|-----------|
|             |                         | Billing<br>Determinate | Rates   | Revenues  | Billing<br>Determinate | Rates     | Revenues | Billing<br>Determinants         | Rates   | Revenues  | Billing<br>Determinants          | Rates     | Revenues  |
| 48          | Lakeview                |                        |         |           |                        |           |          |                                 |         |           |                                  |           |           |
| 49          | 5/8 - inch meter        | 0                      | 10.00   | 0         | 0                      | 10.00     | 0        | 10.00                           | -       | -         | 10.92                            | -         | -         |
| 50          | 3/4 - inch meter        | 0                      | 14.97   | 0         | 0                      | 14.97     | -        | 14.97                           | -       | -         | 16.34                            | -         | -         |
| 51          | 1 - inch meter          | 0                      | 24.92   | 0         | 0                      | 24.92     | -        | 24.92                           | -       | -         | 27.20                            | -         | -         |
| 52          | 1 1/2 - inch meter      | 0                      | 49.87   | 0         | 0                      | 49.87     | -        | 49.87                           | -       | -         | 54.44                            | -         | -         |
| 53          | 2 - inch meter          | 0                      | 79.77   | 0         | 0                      | 79.77     | -        | 79.77                           | -       | -         | 87.08                            | -         | -         |
| 54          | 3 - inch meter          | 0                      | 149.58  | 0         | 0                      | 149.58    | -        | 149.58                          | -       | -         | 163.28                           | -         | -         |
| 55          | 4 - inch meter          | 0                      | 249.30  | 0         | 0                      | 249.30    | -        | 249.30                          | -       | -         | 272.14                           | -         | -         |
| 56          | 6 - inch meter          | 0                      | 498.60  | 0         | 0                      | 498.60    | -        | 498.60                          | -       | -         | 544.27                           | -         | -         |
| 57          | 8 - inch meter          | 0                      | 0       | 0         | 0                      | 0         | -        | -                               | -       | -         | -                                | -         | -         |
| 58          | Total Meters            | 0                      | 0       | 0         | 0                      | 0         | -        | -                               | -       | -         | -                                | -         | -         |
| 59          |                         | 0                      | 0       | 0         | 0                      | 0         | -        | -                               | -       | -         | -                                | -         | -         |
| 60          | Volumetric              |                        |         |           |                        |           |          |                                 |         |           |                                  |           |           |
| 61          | First                   | 400 CF                 | 0       | 0.304     | 0                      | 0         | 0.304    | -                               | 0.304   | -         | 0.332                            | -         | -         |
| 62          | Next                    | 6,100 CF               | 0       | 2.896     | 0                      | 0         | 2.896    | -                               | 2.896   | -         | 3.161                            | -         | -         |
| 63          | Next                    | 43,500 CF              | 0       | 1.919     | 0                      | 0         | 1.919    | -                               | 1.919   | -         | 2.095                            | -         | -         |
| 64          | Next                    | 450,000 CF             | 0       | 1.372     | 0                      | 0         | 1.372    | -                               | 1.372   | -         | 1.498                            | -         | -         |
| 65          | Next                    | 1,000,000 CF           | 0       | 1.082     | 0                      | 0         | 1.082    | -                               | 1.082   | -         | 1.181                            | -         | -         |
| 66          | All Over                | 1,500,000 CF           | 0       | 0.698     | 0                      | 0         | 0.698    | -                               | 0.698   | -         | 0.762                            | -         | -         |
| 67          | Total Lakeview          | 0                      | 0       | 0         | 0                      | 0         | -        | -                               | -       | -         | -                                | -         | -         |
| 68          |                         | 0                      | 0       | 0         | 0                      | 0         | -        | -                               | -       | -         | -                                | -         | -         |
| 69          | Total Gross             | 1,178,392              | 940,172 | 1,178,392 | 940,172                | 1,178,392 | 940,172  | 1,178,392                       | 940,172 | 1,178,392 | 1,178,392                        | 1,026,098 | -         |
| 70          | Correction & Allowances |                        |         |           |                        |           |          |                                 |         |           | (25,402)                         | 0 836     | (21,236)  |
| 71          | Net Amount              | 1,178,392              | 940,172 | 1,178,392 | 940,172                | 1,178,392 | 940,172  | 1,178,392                       | 940,172 | 1,178,392 | 1,152,990                        | 0 836     | 1,004,862 |

Tennessee-American Water Company

## Application of Present and Proposed Rates to Billing Determinants

COMMONWEALTH OF PENNSYLVANIA  
COUNTY OF CUMBERLAND, TO-WIT:

## AFFIDAVIT

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the Commonwealth and County aforesaid, personally came and appeared Paul R. Herbert, who, being by me first duly shown deposed and said that,

He is appearing as a witness on behalf of Tennessee-American Water Company before the Tennessee Regulatory Authority, and if present before the Authority and duly sworn, his direct testimony would set forth in the annexed transcript.



Paul R. Herbert

Taken, subscribed and sworn to before me this 7<sup>th</sup> day of September, 2004.



Notary Public

